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ABSTRACT

The Classroom Interaction Analysis Index (CIAI) was developed to categorize the actions of teachers and students as they interact in classroom situations. The CIAI rating system is easy to learn and easy to use. Experience has shown that the average teacher or supervisor can use it effectively after three or four one-hour sessions. The purpose of the instrument is to provide a profile of classroom behaviors and verbalizations during the entire lesson. These profiles can then be compared and analyzed. Presently, the CIAI is being used in teacher training, inservice training of supervisors, and further research. Included are the instrument itself, explanations of the categories and items of the instrument, and a bibliography. (Author/MLF)

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DEVELOPMENT AND USE OF THE CLASSROOM INTERACTION ANALYSIS INDEX AS A TEACHING AND RESEARCH INSTRUMENT

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CLASSROOM INTERACTION ANALYSIS INDEX

Introduction

The Classroom Interaction Analysis Index (CIAI) was developed as the result of a perceived need for an instrument which would help an observer categorize the actions of teachers and students as they interact in classroom situations. The author first began his efforts to develp some kind of analysis index in 1971. The first instrument evolved was called the Analysis of Teaching Index (ATI). The ATI has been used by several observers on both live classrooms and on video-taped lessons. Norms were developed for it, consequently it was reluctantly revised into the present instrument. However, work with the ATI revealed a need for rearranging the items of the Index, refinement of them, and the addition of several items. The ATI was developed by adapting the seven items used by John Withall and Robert Ribbie to comprise, the Social-Emotional Climate Index, and six items used by Anita Simon and Yvonne Agazarian in the Sequential Analysis of Verbal Interaction. Three items directly related to teacher introduction of, development of, and closure of subject matter were added to make up the sixteen items of the ATI.

Users of the ATI found it to be a great improvement over some earlier instruments since it provided for categorization of all kinds of teacher actions and behaviors and all kinds of student behaviors, not just verbal behaviors. However, some of the items were not clearly defined; thus, different observers sometimes placed the same teacher action or student action in different categories. Also there was considerable overlap between

some of the categories. Use of the ATI pointed up the need for rearranging the items in a more logical fashion and the need for the addition of several items. All these considerations led the author to revise the ATI into the Classroom Interaction Analysis Index. An even greater need for a definition of the teacher and student behaviors which should be classified in each category developed as the instrument was used. These definitions were developed in an effort to bring about greater uniformity in the use of the CIAI.

There are two major categories of action or behavior used in the instrument. The first of these is teacher verbalizations, actions or behaviors. The second is student verbalizations, actions or behaviors. The only time the raters using the instrument experience difficulty with these two major categories is when a student is making a presentation. Most raters view students who are making a presentation as the teacher; thus, student behaviors, actions, and verbalizations in such situations are recorded in one or more of the ten items comprising major Category I. The responses of other students are recorded in one or more of the items comprising Category II. Each rater decides for himself where to record the behaviors of a student who is making a presentation or leading a discussion. When the instrument is used to analyze behaviors, verbalizations, and actions in team teaching situations, the rater must make some decisions about where to record them. The purpose of the instrument is to provide a profile of the classroom behaviors and verbalizations in the entire lesson. These profiles can then be compared and analyzed.

Using The CIAI

The CIAI is not an incremental interaction analysis system. If nothing is happening in the classroom (or nothing new), then nothing is recorded. The rating system is easy to learn and easy to use. Experience has shown that the average

teacher or supervisor can use it effectively after three or four one hour sessions. Procedurally, the rater simply tallies a teacher or student behavior in the appropriate box of the instrument each time it occurs.

We usually video-tape the lessons, often micro-lessons and often team taught lessons, then we teach the raters to use the CIAI as they view the video-tape. However, the system can be used on live classrooms without difficulty.

A number of research studies have been done with the CIAI. Walter and David Sistrunk normed the instrument originally. They obtained an alpha coefficient of .90. David Sistrunk studied a group of high school social studies students in 1975-1976 to determine if directive and non-directive methods yielded significantly different results. He found the profiles of non-directive classes heavily skewed toward major Category II (student behaviors); but, he also found that non-directive teaching permitted introduction and development of more concepts, facts, and skills than did directive teaching. James L. Whitehead found similar results working with adult education (ABE Level II) students in 1976. Walter Sistrunk and Charles Adams found in 1978-1979 that college classes yield similar results. They also found that student teacher self ratings using the CIAI agreed much more closely with those of the senior researcher than with those of either graduate students trainees or with those of their own peers.

Presently, the CIAI is being used in teacher training, inservice training of supervisors, and in further research. It needs further refining and renorming. We intend doing both next term.

Explanations of Categories and Items of The CIAI

Major Category I — Teacher actions, behaviors and verbalizations

The first major category includes all teacher verbalizations, actions and behaviors whether they originate with the teacher or are responsive to student verbalizations, actions, or behaviors. In short if the teacher does it, it is recorded in one of the ten items in this broad category. Teacher behaviors are divided into four sub-categories. These sub-categories are: (1) subject centered teacher behaviors; (2) neutral teacher behaviors; (3) teacher supportive behaviors; (4) learner supportive teacher behaviors.

Sub-category A. Subject matter oriented teacher behaviors, actions and verbalizations.

This sub-category is composed of three items:

Item 1. The introduction of a fact, concept, attitude, value, skill, or experience into the lesson by a teacher or teacher surrogate;

Item 2. The development of a fact, concept, skill, experience, attitude, or value by a teacher or teacher surrogate;

Item 3. The closure or conclusion of a lesson or any major part of it by a teacher or teacher surrogate.

Item 1. Introductory verbalization and ideas

Everytime the teacher introduces a fact concept, skill, experience, attitude, or value for the first time in the lesson, through any means, his action or verbalization is recorded under Item 1. New concepts, etc., may be introduced by any member of a team in a team taught lesson. Any member of a discussion group may engage in an introductory behavior or verbalization.

Item 2. Developmental verbalization, behaviors, or actions.

All teacher behaviors, both verbal and non-verbal, designed to develop the lesson are recorded in this category. Some examples are:

(a) the teacher explains
(b) the teacher shows
(c) the teacher demonstrates
(d) the teacher gives an example, uses an illustration, makes an analogy, tells an allegory, or develops a point through use of an audio-visual device.

(e) the teacher develops a point through questioning or responses to questions.
(f) the teacher clarifies points that are troubling students.

Item 3. Any teacher effort to summarize, conclude, or bring about closure of a fact, concept, etc. is recorded in item 3.

Sub-category B. Neutral teacher behaviors

Item 4. The teacher says or does something that adds nothing to the lesson.

Anything the teacher says or does that adds nothing to the lesson nor takes anything from it is recorded in item B., 4. Some examples are:

(a) jokes
(b) articulated pauses
(c) teaching material not related to the lesson.

Sub-category C. Teacher supportive behaviors, actions, and verbalizations.

There are three items in this category. These items are the things teachers do because of their psychological needs, or at least they are more teacher reinforcing than student reinforcing or subject matter oriented.

Item 5. The teacher gives directions or asks directive questions.

This item includes all the actions, behaviors, and verbalizations involved in teachers giving directions about what to do or how to do it. Some examples are:

(a) the teacher makes an assignment
(b) the teacher tells students how to do something
(c) the teacher tells the students what to do
(d) the teacher gives directions through the kind of questions asked
(e) the teacher gives written directions.

Item 6. Teacher ego reinforcing.

This item includes teacher verbalization, actions, and behaviors calculated to bolster the ego of the teacher. Some examples are:

(a) use of personal pronouns by teachers
(b) the teacher indicates personal feelings or preferences which do not support learners or subject matter.

(c) the teacher interrupts a student without actually disparaging him.

Item 7. The teacher makes disparaging, reproving, or discouraging statements.

This item includes reproving, disparaging, or discouraging teacher behaviors:

(a) statements such as "that's wrong", "that's not on the subject", "that's an irrelevant question".
(b) orders to shut up, sit down, wait your turn, etc.

Sub-category D. Learner oriented teacher behaviors

There are three items grouped in this category. Basically anything that the teacher does or says that reinforces student attempts to learn or participate is recorded under one of these three items.

Item 8. The teacher makes statements or asks questions which support student questions, statements, or actions.

Item 9. The teacher shows acceptance of student, questions, statements, answers, or actions by adding something to them, or by other types of approval.

Item 10. The teacher supports students by making problem structuring statements or asking problem structuring questions.

Major Category II Learner behaviors, actions, or verbalizations.

There are two broad types of items in the category of learner behaviors, with four items in each group. The first group of items consists of indicators of student approaches to learning. The second group of items consists of indicators of student avoidance of learning.

Sub-category E. Behaviors indicating student approaches to learning.

Item 11. A student asks a clarifying or elaborating question or makes such a statement.

Item 12. A student offers a positive comment or makes a positive response to a question.

Item 13. A student asks where more information can be obtained, or how to obtain more information.

Item 14. A student responds positively to a question or statement made by another student, without going through the teacher.

Sub-category F. Behaviors indicating student avoidance of learning.

Item 15. Students show lack of interest by registering boredom.

Item 16. Students show lack of interest by attempts to disrupt the lesson.

Item 17. A student changes the subject, makes an irrelevant comment, or asks an irrelevant question.

Item 18. A student, or several students, shows reluctance to learn a concept, fact, skill, or attitude. (This may be pretending not to understand when in fact the student does understand).

APPENDIX 1

The CIAI and Brief Explanations

CLASSROOM INTERACTION ANALYSIS INDEX

I. Teacher Actions or Behaviors

A. Subject Matter Oriented Teacher Behaviors
1. The teacher introduces a concept, skill, fact, or experience.
2. The teacher explains, clarifies, or develops the lesson by statement, question, example, demonstration, or other action.
3. The teacher summarizes, concludes, or brings about closure of a topic or lesson by statement, question, or otherwise.

B. Neutral Teacher Behaviors
4. The teacher says or does something that neither adds to the lesson nor takes anything from it.

C. Teacher Supportive Behaviors or Actions
5. The teacher gives directions or asks directive questions.
6. The teacher makes statements or asks questions that tend to support himself, i.e., teacher ego reinforcing.
7. The teacher makes disparaging, reproving, or discouraging statements (or questions) of a student or group of students.

D. Learner Oriented Teacher Behaviors
8. The teacher makes statements or asks questions which support student questions, statements, or actions.
9. The teacher shows acceptance of student, questions, statements, answers, or actions by adding something to them, or by other types of approval.
10. The teacher supports students by making problem structuring statements or asking problem structuring questions.

II. Learner Behaviors or Actions

E. Indicators of Student Approaches to Learning
11. A student asks a clarifying or elaborating question or makes such a statement.
12. A student offers a positive comment or makes a positive response to a question.
13. A student asks where more information can be obtained, or how to obtain more information.
14. A student responds positively to a question or statement made by another student, without going through the teacher.

F. Indicators of Student Avoidance of Learning
15. Students show lack of interest by registering boredom.
16. Students show lack of interest by attempts to disrupt the lesson.
17. A student changes the subject, makes an irrelevant comment, or asks an irrelevant question.
18. A student, or several students, shows reluctance to learn a concept, fact, skill, or attitude. (This may be by pretending not to understand when in fact the student does understand.)

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CLASSROOM INTERACTION ANALYSIS INDEX

Teacher Actions or Behaviors

A. Subject Matter Oriented Teacher Behaviors

1. Introductory

2. Developmental

3. Culminating

B. Neutral Teacher Behaviors

4.

C. Teacher Supportive Behaviors or Actions

5. Directive

6. Ego Reinforcing

7. Disparaging

D. Learner Oriented Teacher Behaviors

8. Supportive

9. Approving

10. Structuring

II. Learner Behaviors or Actions

E. Indicators of Student Approaches to Learning

11. Clarifying

12. Responding

13. Inquiring

14. Additive

F. Indicators of Student Avoidance of Learning

15. Disinterest

16. Disruptive

17. Irrelevant

18. Avoidance

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